



THE BP HAPPINESS SCALE: RELIABILITY AND VALIDITY

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ABSTRACT **INTRODUCTION:** Customer satisfaction and customer happiness are often used interchangeably; however, there is a difference in both, in that happiness is known to lead to health. There are various scales to measure satisfaction and happiness. Scales measuring satisfaction address the healthcare industry, but scales measuring happiness do so for general well-being and mental health. Since happiness is a level above satisfaction, there was a need to develop a scale to measure it for the healthcare industry. This study seeks to test the BP Happiness scale, which was derived from a Delphi study, for reliability and validity. **METHOD:** The study was conducted in VCare Polyclinic, Dubai on 100 patients and their escorts along with 100 healthcare providers. Respondents were administered 3 single-item questionnaires viz. Terrible Delighted Scale, CSAT Scale, and BP Happiness Scale. SPSS was used to analyze the data statistically. **RESULTS:** Using Pearson's coefficient correlation r , it was found that there is a Very Strong correlation between the Terrible Delighted and BP Happiness Scales, and a Strong correlation between the CSAT and BP Happiness Scales. **CONCLUSION:** The study suggests a high degree of reliability and establishes convergent and criterion validity of the BP Happiness scale with the Terrible Delighted and CSAT Scales.

KEYWORDS : BP Happiness Scale, Reliability, Validity

INTRODUCTION

Happiness is a state of well-being, which also denotes health. A person with a high degree or level of happiness is known to experience good health. (Perneger, Hudelson, & Bovier, 2004; Rowold, 2011; Takeyachi et al., 2003)⁶. Happiness with a good or service will ensure customer loyalty.

Measuring happiness has not been an easy task since it is not tangible, can be seen or touched; instead, it is an experience that is merely felt, an emotion. Aristotle^{3,5} was one of the first to introduce the idea of a science of happiness, in terms of a new field of knowledge. Science is measurable, and by that logic, Happiness can also, therefore, be measured. The Healthcare Sector too is moving towards the concept of making their customers happy. This is important as this sector deals with treatment modalities and uses products. To be able to judge customer happiness we need to measure it. The purpose of doing the study was to measure happiness, as it has been observed that satisfied customers may not necessarily exhibit loyalty. Doctor shopping has been a practice among healthcare customers since time immemorial. Maximizing a customer's happiness also leads to improved health of the organisation, thereby improving its profitability.

Customer satisfaction is an important aspect of any organisation. Quality of life can also be perceived in terms of tangible elements like goods or services. Customer satisfaction has been measured recently, using the single item CSAT scale¹¹. The Andrews and Withey¹ single item scale has been around long before and has been used extensively in various settings, both as a single item as well as in conjunction with several items in a questionnaire. Happiness measurement has been around for several decades. However, this has been in the area of general well-being. Customer happiness has, as yet, not been measured. The BP Happiness Scale was derived from a 4 round Delphi study to measure customer happiness concerning goods and services in the healthcare setting. This gave rise to the need for testing it for validity and reliability. The BP Happiness scale is a 7-star Rated Happiness scale. If it can be demonstrated that the scale measures overall happiness validly and reliably, then it would be an accurate representation of happiness. The objective of the study was to correlate the BP Happiness scale with the CSAT and Andrews and Withey scales for reliability and validity.

METHOD

In this research study, the nurse researcher has applied a quantitative survey, to collect information, as the study was to introduce a new scale to measure customer happiness. The strategy of a quantitative survey, through a questionnaire, enabled the nurse researcher to assess its reliability by comparing it with the industry benchmarking practices in the healthcare sector with a special focus on UAE.

Aim:

To enable customers to rate a good that is bought or service that is sought in terms of Happiness, which engulfs feelings of well-being, and health

Objective and Hypothesis:

To validate the Seven Star Rated Scale on health care products and services by correlating it with two other benchmarked scales in the areas of customer satisfaction and happiness.

A corresponding hypothesis was postulated for the above objective.















Null Hypothesis (H0): There will be no correlation between the Seven Star Rated Happiness Scale and the validated Terrible Delighted and Satisfaction Scales.

Research Question:

Is the new scale valid and reliable?

Three single item scales were used to obtain primary information on goods used by 100 healthcare service providers, who rated 50 healthcare goods which consisted of 25 units of Capital Expenditure Budget (CAPEX) items and 25 units of Operational Expenditure Budget (OPEX) items. In the case of services, 100 respondents were selected to study the outpatient services offered by VCare polyclinic, Dubai. This provided a total of 200 respondents. Competent adults, who spoke English and availed of services, as well as, those who used goods confidently, were part of the sample. The Three Rating Scales Used For Obtaining The Feedback On Goods And Services Are Furnished In Table 1

Table 1: Validated And New Scales Used To Obtain Information On The Sample Of Goods And Services

(Validated Scales) Customer Satisfaction Scale (CSAT 2014)						
Extremely Dissatisfied	Somewhat Dissatisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Extremely Satisfied		
Terrible Delighted Scale (Andrew and Withey, 1976)						
						
(New Scale) BP Happiness Scale						
						
Angry	Frustrated	Annoyed	Neutral	Content	Pleased	Delighted

Parallel forms reliability was sought to test the BP Happiness scale with the two validated scales. Pearson's correlation coefficient r was run to determine the reliability and validity of the BP Happiness scale with both the validated scales and scores were graphed onto a Scatter plot.

The questions for the CSAT scale, for staffs and patients, were:
 Overall, how satisfied are you with the goods that you have been using?
 Overall, how satisfied are you with the services that you have received here?

The questions for the Terrible Delighted scale and the BP Happiness scale, for staffs and patients, were:
 Overall, how do you feel about the goods that you have been using?
 Overall, how do you feel about the services that you have received here?

The above three questionnaires used for collecting data were closed-ended questionnaires related to customer satisfaction and customer happiness and were administered on seeking verbal consent.

- A closed-ended questionnaire with 1 question on a benchmarked single item satisfaction scale viz. Customer Satisfaction Scale – CSAT.
- A closed-ended questionnaire with 1 question on a benchmarked single item scale viz. Terrible Delighted Scale.
- A closed-ended questionnaire with 1 question on the developed

Table 2. Correlation Between The Terrible Delighted Scale And The Happiness Scale

Correlations			Terrible-Delighted Scale	Happiness
Terrible-Delighted Scale	Pearson Correlation	1		.945**
	Sig. (2-tailed)			.000
	N	200		200
Happiness	Pearson Correlation	.945**	1	
	Sig. (2-tailed)	.000		
	N	200		200

** . Correlation is significant at the 0.01 level (2-tailed).

There was a very strong, positive correlation between the Terrible Delighted and Happiness scores ($r = .945, N=200, p < .001$). SPSS reports the p-value for this test as being .000

Table 2 above, shows a correlation of 0.945 significant at 0.01 level. The Scatter Plot also depicts a positive linear correlation.

Table 3. Correlation Between The Customer Satisfaction Scale (CSAT, 2014) And The Happiness Scale

Correlations			
		CSAT	Happiness
CSAT	Pearson Correlation	1	.796**
	Sig. (2-tailed)		.000
	N	200	200
Happiness	Pearson Correlation	.796**	1
	Sig. (2-tailed)	.000	
	N	200	200

** . Correlation is significant at the 0.01 level (2-tailed).

There was a strong, positive correlation between the CSAT and Happiness scores ($r = .796, N=200, p < .001$). SPSS reports p-value for this test as being .000

Table 3 above shows a correlation of 0.796 significant at 0.01 level, and the Scatter Plot once again follows closely depicting a positive linear correlation.

Interpretation: This indicates a **Strong Relationship** between the CSAT Scale and the Happiness Scale as evidenced by Pearson's r and Scatter Plot.

CONCLUSION:

Reliability refers to the consistency of a measure. The study used parallel forms reliability¹⁰. When one assesses parallel forms reliability, both forms are used on a group of people simultaneously; a correlation is then sought between the two sets of scores. This is typically done by graphing the data in a scatterplot and computing Pearson's r . In the study, all the 3 forms were used one after the other for healthcare providers and patients/escorts.

scale i.e. BP Happiness Scale.

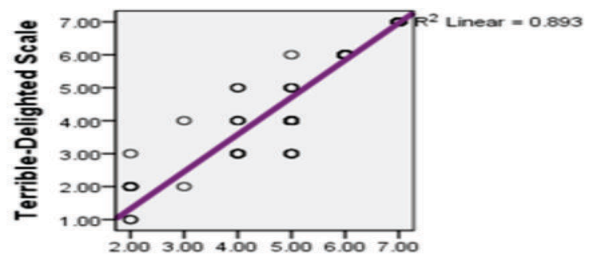
The simple random sampling method was adopted in the case of respondents who are the customers of hospitals. The entire patients and staffs were treated as a single homogenous group. Reliability was ensured as we used the same script to verbally obtain the staffs' and patients' scores the same way every time. All 3 questionnaires were administered to the staffs and patients one after the other.

The data collected were analyzed using SPSS version 20 to derive information and test the hypothesis postulated. The raw data collected was edited, tabulated, coded and transcribed onto the SPSS for measuring descriptive statistics viz. frequency and percentage and inferential statistics i.e. correlation. Descriptive statistic was done on the demographic profile of the 200 respondents. To compare the correlation between CSAT, Terrible Delighted and BP Happiness Scales, Inferential statistics Pearson's coefficient correlation was performed.

RESULTS

Inferential statistics were applied to test for reliability and validity. Pearson's coefficient correlation was utilized to test the Objectives and the Null Hypothesis.

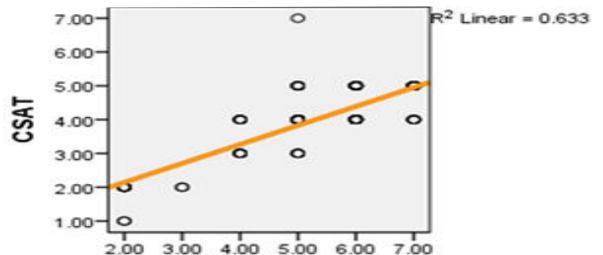
A correlation was sought between the Terrible Delighted Scale and The Happiness Scale. This is depicted in Table 2 and Scatter Plot below.



Happiness

Interpretation: There is a **Very Strong Relationship** between the Terrible Delighted Scale and the Happiness Scale, as evidenced by Pearson's r and Scatter Plot.

The Correlation between the Customer Satisfaction Scale (CSAT, 2014) and the Happiness Scale is depicted in Table 3 and Scatter Plot below.



Happiness

Validity is the extent to which the scores from a measure represent the variable they are intended to. When a measure has good reliability, researchers are more confident that the scores represent what they are supposed to.

Convergent validity^{2,4,7} occurs when new measures of a test are positively correlated with existing measures of the same constructs, whereas Criterion validity⁹ observes how a tool corresponds to other valid tools.

Inferential statistics have demonstrated evidence that the BP Happiness Scale has a Very Strong to Strong Positive Correlation between the two validated scales. This suggests a high degree of reliability thereby establishing convergent and criterion validity.

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